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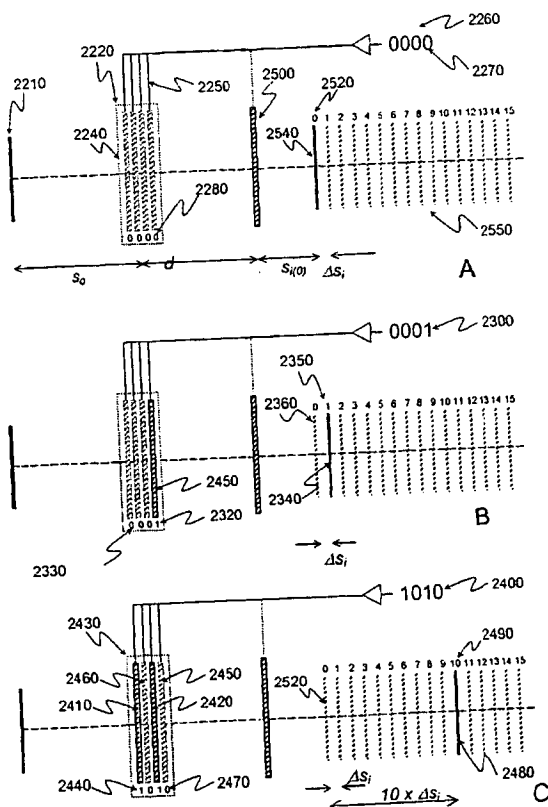
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[Continued on next page]

(54) Title: **COMBINATORIAL OPTICAL PROCESSOR**



(57) Abstract: A combinatorial optical processor and method for the architecture of optical systems utilizes one or more optics modules (2240), each module including a number of individually addressable optical elements (2450). The optical elements arranged and addressed in a combinatorial-arithmetic fashion such that a set of optical filter functions are defined and can be performed by the optical modules. The number of optical filter functions may be an exponential function of the number of addressable optical elements. Additionally, each of the optical filter functions may be addressed at random and a plurality of such functions may be addressed simultaneously. Apparatus (3010), such as imaging systems, may employ the combinatorial optical processor in order to include without limitation the features of being solid-state, projection of images into free space and random addressability of the filter functions.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,764,890 A (HINTON) 16 August 1988 (16.08.1988), see entire document.	1-6, 9-20, 28, 29, 37-40, 46-48, 53 ----- 41
X,P --- Y,P	US 6,295,145 B1 (POPOVICH) 25 September 2001 (25.09.2001), see entire document.	54-63, 66-69, 70, 146 ----- 41
X,P	US 6,185,016 B1 (POPOVICH) 06 February 2001 (06.02.2001), see entire document.	95-98, 104, 105, 113-123

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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*A- document defining the general state of the art which is not considered to be of particular relevance	X	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 6,178,020 B1 (SCHULTZ et al) 23 January 2001 (23.01.2001), see entire document.	7-8, 21-27, 30-36, 42-45, 49-52, 64- 65, 71-94, 99- 103, 106-112, 119, 121, 124- 145, 147

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